# Narrative Report Routing Slip

Mr. Salyer _____ Mr. Ackerknecht _____

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Refuge OTTAWA _____ Period September - December 1961 _____

# OTTAWA NATIONAL WILDLIFE REFUGE

Narrative Report

September 1, 1961 - December 31, 1961

Alfred O. Manke
Refuge Manager

# C O N T E N T S

Narrative Report OTTAWA REFUGE September 1, through December 31, 1961

Ottawa National Wildlife Refuge started to become a reality July 31, 1961, when the United States was granted possession of some 461 acres through a Decree on Declaration of Taking by the Secretary of the Interior. The refuge was "activated" October 16, 1961, when a refuge manager was assigned. Although purchase agreements have been reached with several land owners, the Service has virtually no control over the remainder of the proposed 5000 acres. Consequently, this report is sketchy and incomplete with many topics not being applicable.

## I. GENERAL

### A. Weather Conditions.

| | Snowfall | Precipitation This Month | Precipitation Normal | | Max Temp. | Max. Temp. |
|---|---|---|---|---|---|---|
| September | 0.00 | 5.84 | 3.22 | | 91 | 40 |
| October | 0.00 | 1.66 | 2.10 | | 84 | 36 |
| November | 0.50 | 2.37 | 2.27 | | 75 | 22 |
| December | 2.70 | 1.75 | 2.16 | | 60 | - 2 |
| Total: | 3.20 | 11.62 | 9.75 | Extremes | 91 | - 2 |
| Annual Total | 16.80 | 41.38 | 33.27 | | | |

Weather data as recorded at the United States Department of Commerce Weather Bureau, Post Office Building, Sandusky, Ohio, 25 miles ESE of the refuge area. Weather conditions at Sandusky are believed close enough to those on the refuge to be considered one and the same.

B. Habitat Conditions.

1. Water. No Service plan or control was in effect during the reporting period. Because both controlled and uncontrolled water levels play an important part of the marshes encompassed in the project area they will be dicussed separately.

a. Controlled Waters. Water levels were managed similar to previous years by individual hunt clubs. Less than half of the pools were drained, sowed to buckwheat and/or millet, and reflooded prior to hunting season. The rest were held and/or pumped to the levels desired with little manipulation. These areas offered little but water and cattails.

b. Uncontrolled Waters. The water levels in uncontrolled marshes fluctuate with Lake Erie. Strong southerly winds "blew" the water out of the marshes throughout much of the period. Consequently, many areas consisted of a fringe of "High and dry" cattails, a large expanse of mudflat, and some shallow water not particularly attractive to ducks.

2. Food and Cover. Food was not too plentiful on the refuge, but there was an adequate supply on the surrounding area well with in feeding range of the waterfowl. A rather small percentage of the marsh area provided food. Also, many farmers that farm close to marsh areas have quit growing corn because of blackbird depredations. Even those who planted crops to entice ducks harvested a large part of these crops before the ducks had a chance to feed on them.

A few corn fields picked on the refuge area during the hunting season would receive heavy utilization for a few evenings by field feeding ducks. Then the hunters would find and shoot them out. This was true for the surrounding area as well. The general pattern was for the ducks to rest several miles offshore in Lake Erie and in the rest areas of some of the larger hunt clubs until evening. Then their food-forays would take them 5 to 15 miles inland.

Prior to hunting season several hundred geese fed in the alfalfa and winter grain fields on the refuge area. Soon after the opening of the hunting season the geese "moved" to a private refuge where they were fed and protected. This private refuge is about 15 miles south of the Ottawa Refuge area. The private refuge is a controversial issue for several reasons, but it undoubtedly reduces the kill. This is the only area where "legal" artificial feeding occurred.

The 461 acres in the possession of the Service offered some sanctuary to the ducks. Several members and caretakers of surrounding hunt clubs greatly over estimated the number using the area.

According to these sources thousands of ducks were harbored on this area. The writer never observed more than 500 ducks at any time. The overestimates were always included when these gentlemen were complaining about the curtailed bag and season limits. Few hunters seemed to realize the actual plight of the ducks.

## II. WILDLIFE

### A. Migratory Birds.

1. Waterfowl. The general downward trend of our waterfowl population experienced throughout most of North America was also apparent here. Another much more local trend has been noticed by observers. Fewer ducks and geese have been utilizing the marshes including those encompassed by the proposed refuge since the conversion from corn to tomatoes has gained momentum. As previously described, the pattern is for the ducks to rest and loaf on Lake Erie proper and some of the larger bays and estuaries, and fly 5 to 15 miles inland to feed in the corn fields. Consequently, the number of ducks using the area that will be refuge has decreased even faster than the general trend.

   As has been the practice for over 10 years, weekly aerial counts were made by State personnel. These counts cover an area from about Sandusky to Toledo in a band wide enough to take in all of the major waterfowl areas. Census figures for the refuge area were not kept separate. Consequently, waterfowl population figures specific to the refuge area were not initiated this period. Spot counts compared with the weekly censuses indicate that the refuge area harbored an estimated 10 percent of the total population for the area. The peak population for the entire census area occurred in mid-November when a little over 50,000 waterfowl were counted. The number of waterfowl had dropped to about 19,000 by the mid-winter inventory conducted January 8, 1962. A startling fact was noticed when mid-winter inventory figures were compared. In January 1960, 34,000 ducks were counted of which 12,800 were blacks and 18,400 were mallards. In January 1962, there were 12,700 blacks but only 2,400 mallards. The difference in the total counts is almost exactly the difference in the number of mallards.

2. Other Waterbirds. A wide variety of water and marsh birds use the refuge area. Some nesting takes place on the refuge area proper, but more of it takes place on West Sisters Island National Wildlife Refuge some nine miles off-shore. West Sisters Island has been placed under the administration of Ottawa Refuge. West Sisters Island is one of the few spots left in northern Ohio that provides some area for colony nesting birds. Black-crowned night herons, American egrets, and double-crested cormorants are the principal species nesting on the island. The scourge of the domestic rabbits seems to have been alleviated and new vegetation is becoming established. It will be interesting to observe the effects this will have on the birds. Although specific population figures are not known, NR-1A indicates the wide variety of species making use of the refuge.

3. Shorebirds. Numerically, this group probably surpasses any other group because of the large number of gulls that make Lake Erie home-base. In addition to the gulls, almost every species of sandpipers, and several species of terns stop in the area during migrations. Common and black terns nest in the area.

4. Doves. Doves are year-round residents of the area, although the majority go south for the winter. Mr. Laurel Van Camp, Ottawa County Conservation Officer, has banded over 1000 doves a year (all ages) for the past six years. Retraps indicate a mixed, winter population. In December he has retrapped birds banded the previous spring as nestlings, adults banded throughout the year, and also doves banded as nestlings and adults in previous years. There is no open season on doves in Ohio, and the population is equal to or higher than previous years.

B. Upland Game Birds. Pheasants and bob-white quail are the only game spedies of significance. Both species are down from the past several years. According to hunters and "outdoor editors" of the several papers this past season has been one of the worst in many years. Although a decline was noticed, the pheasant population is in no danger. As seems to be characteristic of pheasants, as the hunting pressure and winter progresses they head for the cattail marshes, and few waterfowl hunt clubs permit pheasant hunting. This pretty well assures survival of a nesting population.

Quail on the other hand, are just about at the edge of their range and cannot take much abuse. They have had poor nesting success for the past several years. In all probability the refuge will benefit this species and a small population will continue to survive.

C. Big Game Animals. White-tailed deer is the only species of big game animals present, and is represented by an estimated dozen individuals. With protection from disturbande and harrassment the "herd" will probably increase some, but it is doubtful that deer will ever become abundant in this heavily populated, urban section of the country.

D. Fur Animals, Predators, Rodents, and other Mammals. It is difficult to determine whether the muskrat population is up or down. Marsh areas that contained water throughout the year have high populations. Those areas drained for waterfowl or other management have few. Several trappers have stated that they have trapped from 2000 to 4000. Mr. Meinke trapping the "Pintail Marsh" reports poor success. His efforts and reports probably are biased however, because of his circumstances. All indications are that the refuge area contains a good healthy population.

Both red fox and raccoon populations seem to be increasing. The hunters usual complaint that the fox and 'coon are getting all the pheasants and rabbits is heard everywhere. Undoubtly both of these species are well represented in the area. Mr. Van Camp stated that 18 of 22 wood duck nests were destroyed by raccoon. These were nesting attempts made in artificial boxes. From this information it would seem that raccoon have a decided impact upon the duck-nesting success.

Rabbits and skunks also have their ups and downs, but at the present time neither species is a problem nor endangered. Some damage to orchards has been done by rodents. Also, groundhogs are a nuisance with their burrowings in dikes and hay fields.

E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies. One pair of bald eagles nest on the refuge area, and as high as 17 have been counted in the area during migrations. A new parking area constructed in connectionswith the Crane Creek State Park ~~was~~ is perilously close to the nest site of the eagles. So close that the eagles started a new nest several miles away, but used neither location. It is unknown whether or not any young eagles were raised by this pair in 1961.

Almost all species of hawks are represented on the area either as nesters or migrants. Only the screech and great horned owls are common and nest on the area. Snowy owls are among the other species that are occasionally observed.

Our usual nemesis, the crow, is not considered a problem child to the area. Several factors are working against this species. There are few roosting sites left and there are a lot of crow hunters in this part of the country. Also, raccoon destroy a high percentage of the nests.

F. Other Birds. A bird list for the refuge has not been prepared as yet. A great variety and number of birds inhabit the area. Bird watchers record well over 200 species each year, and farmers record well over 2,000,000 blackbirds each year. In this area blackbirds replace crows as the nemesis.

G. Fish. Fish populations in Lake Erie and connecting streams have taken a decided turn for the worse for the past decade. Carp, buffalo, shad, and drum are replacing the bass and "blue pike" as waters become more polluted with silt, sewage, and chemicals. Numerous meetings and conferences have been held to plan and generate a concerted effort to alleviate this situation.

Although there is little fishing pressure in the refuge area itself, almost all of the marsh-caretakers are commercial fishermen and use the "impoundments" to hold and feed carp. The public has been pretty well excluded from the refuge area by the marsh owners.

H. Reptiles. Compared to Mingo Refuge there are none of significance. About once in five years someone sees a rattlesnake. There is a fairly high population of turtles in the area. Species and percent of composition have not been determined.

I. Disease. A small outbreak of botulism was reported at Sandusky Bay near the Winous Point Hunt Club. Since this occurred away from the refuge area and prior to the writers arrival, no details are known. Because of the lack of information it is aassumed that the outbreak was not too serious.

Lead poisoning could become a serious problem on the refuge. The refuge will be taking over marsh areas that have been hunted heavily for 25 years or more. Undoubtedly there is a tremendous accumilation of shot in these areas. After these areas become part of the refuge and the ducks have time to loaf and dabble without disturbance, they probably will ingest much more shot than under past circumstances.

## III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development. The only projects undertaken and completed were posting the boundary of the Pintail Marsh with refuge markers and establishing temporary office space in Oak Harbor, Ohio.

B. Plantings.

1. Aquatics and Marsh Plants. None by or under the control of the refuge. Some private owners planted buckwheat for flooding.

2. Trees and Shrubs. None by or under the control of the refuge. Dutch Elm disease is running rampant in the area, and probably most of the elm trees on the refuge will be killed. There have been many meetings, dissertations, and articles regarding the costs and values of spraying to control the disease. Many municipalities have thrown in the towel and will spend no more for spraying.

3. Upland Herbaceous Plants. Nothing to report.

4. Cultivated Crops. None by or under the control of the refuge. As previously stated, many farmens have quit trying to grow corn because of the blackbird depredations. This puts the refuge behind the eight-ball because many cooperators will not want to try to grow corn again, and it has ruined the crop history in regards to the A. S. C. office. Consequently, the A. S. C. will probably want to keep the lid on the corn acreage.

C. Collections and Receipts.

1. Seed or other Propagules. None.

2. Specimens. None.

D. Control of Vegetation. None.

E. Planned Burning. None.

F. Fires. None.

## IV. RESOURCE MANAGEMENT

A. Grazing. None.

B. Haying. None under the control of the Refuge. There are several hundred acres of alfalfa on the refuge area which is cut five and six times per year for processing rather than hay. This type of management has both good and bad aspects as far as the refuge is concerned. It almost completely eliminates the weed problem and the alfalfa is in a good stage for the geese. Several hundred geese fed in these fields for several weeks.

It destroys or precludes blackbird nests, and there is a ready market for it. On the other hand it almost precludes duck nesting in these areas, and almost no organic matter is returned to the soil.

C. Fur Harvest. No permits issued. The Service is honoring a lease on the Pintail Marsh tract that permits the tenant to trap. In lieu of the Government's normal shares of the pelts, an adjustment in payment for the property will be brought to the courts attention for consideration.

D. Timber Removal. None.

E. Commercial Fishing. None.

F. Other Uses. None.

## V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Progress Report. None in progress.

## VI. PUBLIC RELATIONS

A. Recreational Uses. None under the control of the refuge. This will be a big headache in the future years. The refuge will be in control of several access points to Lake Erie, and a mile stretch of sand beach that has not been open to the public.

B. Refuge Visitors.

| DATE | NAME | ADDRESS | PURPOSE |
|---|---|---|---|
| 10/26,27 | Reg. Sup. Carpenter | Minneapolis | Orientation & advice |
| 10/26,27 | Reg. Sup. Nelson | Minneapolis | Orientation & acvice |
| 10/26 | J. R. Beck, P & R | Columbus | Sprtmns meeting |
| 11/2 | R. M. Shannon | Toledo | Info purch. Willow Pt. Club |
| 11/8,9 | Reg. Sup. Davis | Minneapolis | Enforc. & mngt. |
| 11/9 | SCS Cons. Williams | Oak Harbor | Info. re bound. & land use |
| 11/13 | Pol. Chief Taylor | Oak Harbor | Law enforc. authority |
| 11/13-18 | Reg. Realtor Larie | Minneapolis | Land acquisition |
| 12/4 | E. H. France | Delphos, O. | Sale of property |
| 12/13 | K. Bednarik, OlDiv. | McGee Marsh | Rprt. mtng. O. Cons. Cong. |
| Numerous | G.M.A. Bosak | Port Clinton | Orientation & enforc. |

C. Refuge Participation.

10/26 Wolf Creek Sportsmans Meeting with J. R. Beck, Refuge Program.
11/6-8 Shiawassee Refuge, Budget and Program Schedule work shop.
11/11 Ohio Wldlf. Mngt. Assc., Columbus, with K. Bednarik, met with Ohio Division of Wildlife personnel inc. Chief Olds.

D. Hunting. Hunting pressure and success were below normal. Even with a shortened season, the McGee Marsh Public Shooting Area did not receive enough applicants to fill the blinds. The last two weeks of the season all applicants were accommodated on Saturdays. Not enough applicants were received to warrent shooting on week days. Some 1049hunters had a success ratio of 0.87 as compared to1604 hunters with a success ratio of 1.04 last year, and a high of 648 hunters with a success ratio of 2.80 in 1951. Total kill at McGee Marsh for 1961 was 915 , compared to 1604 in 1960, and 1815 in 1951.

E. Violations. No violators were apprehanded by the writer. Some assistance was given Game Management Agents. The primary violation in the area was "supplementing" flooded crops, a most difficult violation to prove.

F. Safety. No accidents this period. Ottawa Refuge now has a total of 77 accident-free days. Since the writer is the only employee on the refuge, no formal meetings were held. All current safety literature has been read, and as hazardous conditions become apparent they will be corrected.

## VII. OTHER ITEMS

A. History. This being the first narrative report for Ottawa Refuge, some historical information is included in theis section.

Ottawa National Wildlife Refuge is located along the south-western shore of Lake Erie in north-central Ohio. It lies about half and half in Lucas and Ottawa Counties almost mid-way between Toledo and Port Clinton. When fully acquired, Ottawa Refuge will encompass about 5,000 a cres. Small by National Wildlife Refuge standards, its potential is enhanced by several features. First, it is bound on the north by Lake Erie. This gives it a more than adequate amount of open water and fly-space. Second, it is bound on the east by McGee Marsh, a State-owned and managed marsh of some 2,600 acres. Under present management practices this area will act as a buffer-zone, and in general supplement the refuge. Third, the land is highly productive. Under normal conditions an adequate amount of food can be produced. Close to 2,000 acres of cropland are included which compares favorably with many larger refuges. Fourth, there are few "wasted acres", almost all of the area can be utilized for and by waterfowl. In other words, the 5,000 acres can be intensively managed for waterfowl.

Ottawa Refuge is part of a prairie-marsh that once extended from Port Clinton, Ohio, to Detroit, Michigan. It was about 90 miles long and from two to ten miles wide. The onslaught of civilization has exacted its toll. Out of an estimated 300,000 acres of marsh only about one-tenth of it exists today.

Also, much of the remaining 30,000 acres have little or no value for waterfowl because of human encroachment, proximity, and activities. An estimated 8,000,000 people are within a few hours drive of the marsh. Prior to man's despoilment the marsh vegetation consisted chiefly of wild celery, pondweeds, coontail, wild rice, blue-joint grass, cord grass, various sedges, and cattail. Now cattails predominate.

Soils of the marsh are of glacial and lacustrine derivation. They are dark-colored and fertile, but are heavy-textured and only slowly permeable being over 40 percent clay. Lying in the Lake Plain the topography is extremely flat with almost no gradient. Consequently, the slow permeability plus the lack of gradient adds up to very poorly drained soils.

Lake Erie has quite a moderating effect on the local climate. A narrow fringe along the lake normally has a month longer growing season than areas of similar latitude not so influenced. The average frost-free period is April 20, to October 30, providing a growing season of about 190 days. Precipitation in the refuge area is normally well distributed and averages a little over 30 inches annually.

A favorable climate plus fertile soil prompts farming. With these two important ingredients, the obstacle of poor drainage has spurred intensive and extensive drainage systems. Most of the old marsh area that is presently being farmed is tiled, leveed, and pumped. Under these conditions the productivity and value of the land are very high. The success of some of these ventures has spurred even greater and more divergent enterprises all of which are hastening the doom of the marsh.

It was one of these more divergent enterprises that prompted acquisition of the refuge area. One of the better segments of the marsh was to be drained, filled, and channelled to provide a multi-million dollar housing-marina development. The shores of Lake Erie have long been in great demand. Industrial, recreational, agricultural, and housing interests have been in keen competition for these valued acres for the past century. The refuge lies within an area now dominated by recreational interests. A rapidly expanding population and industries are, however, making rapid inroads into this "vacation land". Toledo suburbs now extend to the refuge area some 20 miles from the downtown section.

The refuge includes about one mile of sandy lake front suitable for a swimming beach. Since it lies adjacent to the State-owned Crane Creek public beach, and access to Lake Erie is rather limited there undoubtedly will be heavy pressure to open this stretch of beach to the public.

Also, since boat access to the lake is becoming more limited there will be pressure exerted for a public boat launching ramp with a suitable road and parking area.

The Lake Erie marsh has always attracted large numbers of waterfowl. It is here that segments of the Atlantic and Mississippi flyways split to go their separate ways. This marsh was widely known as a duck-hunters paradise. Almost all of the marshland suitable for waterfowl was and still is owned and controlled by a comparitively few private hunt clubs. Some of these clubs have been in existance for nearly one hundred years. Membership is extremely limited. A share in some clubs cost as much as $25,000, and membership is almost a matter of heritage as well as wealth.

Under the clubs tutelage the character of the marsh has changed. Clubs are no longer dependant upon the vagaries of Lake Erie to have the marsh flooded during the waterfowl season. Dikes and pumps now assure it. The vegetation, however, has degenerated to almost solid cattails. Marsh management was largely a matter of corn, cattails, and flooding. This has changed some with the advent of the anti-baiting regulations. Now many segments are pumped dry, sowed to a duck-attracting crop, then reflooded for the hunting season. These manuevers have undoubtedly helped hold fall migrants by making a good quantity of food available. They may also have reduced waterfowl reproduction by drying marsh areas during the nesting season.

Primary objectives of the refuge are to provide food, cover, and sanctuary for migrating, wintering, and nesting waterfowl in the proper balance for maximum utilization by all species concerned. Management then, shall be directed towards meeting this balance.

SIGNATURE PAGE

Submitted by:

Alfred O. Manke
(Signature)

Date: January 19, 1962

Refuge Manager
Title

Approved, Regional Office:

Date: 2-1-62

(Signature)

Regional Refuge Supervisor

3-1750
Form NR-1
(Rev. March 1953)

# WATERFOWL

REFUGE OTTAWA MONTHS OF September TO December 1961, 19___

| (1) Species | (2) Weeks of reporting period: 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Swans: | | | | | | | | | | |
| Whistling | | | | | | | | | | |
| Trumpeter | | | | | | | | | | |
| Geese: | No weekly waterfowl censuses available for refuge area. Total estimated data on reverse side of 3-1750a. | | | | | | | | | |
| Canada | | | | | | | | | | |
| Cackling | | | | | | | | | | |
| Brant | | | | | | | | | | |
| White-fronted | | | | | | | | | | |
| Snow | | | | | | | | | | |
| Blue | | | | | | | | | | |
| Other | | | | | | | | | | |
| Ducks: | | | | | | | | | | |
| Mallard | | | | | | | | | | |
| Black | | | | | | | | | | |
| Gadwall | | | | | | | | | | |
| Baldpate | | | | | | | | | | |
| Pintail | | | | | | | | | | |
| Green-winged teal | | | | | | | | | | |
| Blue-winged teal | | | | | | | | | | |
| Cinnamon teal | | | | | | | | | | |
| Shoveler | | | | | | | | | | |
| Wood | | | | | | | | | | |
| Redhead | | | | | | | | | | |
| Ring-necked | | | | | | | | | | |
| Canvasback | | | | | | | | | | |
| Scaup | | | | | | | | | | |
| Goldeneye | | | | | | | | | | |
| Bufflehead | | | | | | | | | | |
| Ruddy | | | | | | | | | | |
| Other | | | | | | | | | | |
| Coot: | | | | | | | | | | |

INT.-DUP., D.C.-53824-59

3 -1750a
Cont. NR-1
(Rev. March 1953)

# WATERFOWL
(Continuation Sheet)

REFUGE OTTAWA MONTHS OF September TO December 1961 19____

| (1) Species | (2) Weeks of reporting period: 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | (3) Estimated waterfowl days use | (4) Production: Broods seen | Estimated total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Swans: | | | | | | | | | | | |
| Whistling | | | | | | | | | | | |
| Trumpeter | | | | | | | | | | | |
| Geese: | | | | | | | | | | | |
| Canada | No weekly waterfowl censuses available for refuge area. See reverse side for estimates of totals | | | | | | | | | | |
| Cackling | | | | | | | | | | | |
| Brant | | | | | | | | | | | |
| White-fronted | | | | | | | | | | | |
| Snow | | | | | | | | | | | |
| Blue | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| Ducks: | | | | | | | | | | | |
| Mallard | | | | | | | | | | | |
| Black | | | | | | | | | | | |
| Gadwall | | | | | | | | | | | |
| Baldpate | | | | | | | | | | | |
| Pintail | | | | | | | | | | | |
| Green-winged teal | | | | | | | | | | | |
| Blue-winged teal | | | | | | | | | | | |
| Cinnamon teal | | | | | | | | | | | |
| Shoveler | | | | | | | | | | | |
| Wood | | | | | | | | | | | |
| Redhead | | | | | | | | | | | |
| Ring-necked | | | | | | | | | | | |
| Canvasback | | | | | | | | | | | |
| Scaup | | | | | | | | | | | |
| Goldeneye | | | | | | | | | | | |
| Bufflehead | | | | | | | | | | | |
| Ruddy | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| Coot: | | | | | | | | | | | |

(over)

| | (5) Total Days Use | (6) Peak Number | (7) Total Production | SUMMARY |
|---|---|---|---|---|
| Swans | None | None | None | Principal feeding areas |
| Geese | 15,000 ~~150,000~~ | 2000 | None | |
| Ducks | 350,000 | 5000 | None this period | Principal nesting areas |
| Coots | 25,000 | 2500 | None | |
| | | | | Reported by Alfred O. Manke |
| Totals | 390,000 | 9500 | | |

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

(1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.

(2) Weeks of Reporting Period: Estimated average refuge populations.

(3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.

(4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(5) Total Days Use: A summary of data recorded under (3).

(6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.

(7) Total Production: A summary of data recorded under (4).

Interior Duplicating Section, Washington, D. C. 37944
1953

3-1751
Form NR-1A
(Nov. 1945)

# MIGRATORY BIRDS
(other than waterfowl)

Refuge OTTAWA Months of September to December 1951

| (1) Species | (2) First Seen | | (3) Peak Numbers | | (4) Last Seen | | (5) Production | | | (6) Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Common Name | Number | Date | Number | Date | Number | Date | Number Colonies | Total # Nests | Total Young | Estimated Number |
| I. Water and Marsh Birds: | | | | | | | | | | |
| Common Loon | migrants | | common | | | | | no | | |
| Grebes, Eared & Pied-bill | migrants | | common | | | | | occasional | | |
| Great Blue Heron | | | common | | | | | yes | | |
| American Egret | migrant | | common | | | | 1 | yes | | |
| Snowy Egret | | | rare | | | | | no | | |
| Green Heron | | | common | | | | | yes | | |
| Black-crowned Night Heron | | | common | | | | 1 | yes | | |
| American Bittern | | | common | | | | | yes | | |
| Rails, King & Virginia | | | common | | | | | yes | | |
| Coots | migrant | | common | | | | | yes | | |
| White Pelican | | | rare | | | | | | | |
| Double-crested Cormorant | | | common | | | | 1 | yes | | |
| Glossy Ibes | | | rare | | | | | | | |
| II. Shorebirds, Gulls and Terns: | | | | | | | | | | |
| Terns, Common & Black | | | common | | | | | yes | | |
| Caspian Tern | migrant | | uncommon | | | | | | | |
| Gulls, Herring, Ring-billed, & Bonapartes | | | Abundant | | | | | yes | | |
| Killdeer | | | common | | | | | yes | | |
| Sandpipers, almost every species | migrant | | common | | | | | | | |
| Upland Plover | | | uncommon | | | | | | | |
| Wilson's Phalarope | migrant | | common | | | | | | | |

(over)

| (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|
| III. Doves and Pigeons: | | | | | |
| Mourning dove | Common year-round, more abundant in summer | | | | |
| White-winged dove | | | | | |
| IV. Predaceous Birds: | | | | | |
| Golden eagle | Ra | rare | | | |
| Duck hawk | | rare | | | |
| Horned owl | | common | | yes | |
| Magpie | | | | | |
| Raven | | | | | |
| Crow | | common | | yes | |
| Bald Eagle | migrant | common | | yes | |
| Red-tailed hawk | | common | | yes | |
| Red-shouldered | | common | | yes | |
| Coopers hawk | | common | | yes | |
| Sparrow hawk | | common | | yes | |
| Marsh hawk | | common | | yes | |
| B road-winged hawk | migrant | common | | | |
| Sha rp-shinned hawk | migrant | uncommon | | | |

Reported by Alfred O. Manke

## INSTRUCTIONS

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first refuge record for the species for the season concerned.

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated to' number of the species using t' refuge during the period concerned.

INT.-DUP. SEC., WASH., D.C.

3-1752
Form NR-2
(April 1946)

# UPLAND GAME BIRDS

Refuge OTTAWA Months of September to December 1961, 19 __

| (1) Species | (2) Density | | (3) Young Produced | | (4) Sex Ratio | (5) Removals | | | (6) Total | (7) Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| Common Name | Cover types, total acreage of habitat | Acres per Bird | Number broods obs'v'd. | Estimated Total | Percentage | Hunting | For Re-stocking | For Research | Estimated number using Refuge | Pertinent information not specifically requested. List introductions here. |
| Pheasant | 2000 ag. 2000 cattail marsh | | | | | | | | 500 | |
| Bob-white Quail | | | | | | | | | 50 | |

# INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.

(4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.

(5) REMOVALS: Indicate total number in each category removed during the report period.

(6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.

(7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1753
Form NR-3
(June 1945)

# BIG GAME

Refuge OTTAWA Calendar Year 1961

| (1) Species | (2) Density | (3) Young Produced | (4) Removals | | | | (5) Losses | | | (6) Introductions | | (7) Estimated Total Refuge Population | | (8) Sex Ratio |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Common Name | Cover types, total Acreage of Habitat | Number | Hunting | For Re-stocking | Sold | For Research | Predation | Disease | Winter Loss | Number | Source | At period of Greatest use | As of Dec. 31 | |
| White-tailed deer | | | | | | | | | | | | 12 | 12 | |

Remarks:

Reported by _____

# INSTRUCTIONS

Form NR-3 - BIG GAME

(1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.

(2) DENSITY: Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge: once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED: Estimated total number of young produced on refuge.

(4) REMOVALS: Indicate total number in each category removed during the year.

(5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.

(6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.

(7) TOTAL REFUGE POPULATION: Give the estimated population of <u>each</u> <u>species</u> on the refuge at period of its greatest abundance and also as of Dec. 31.

(8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

3-1755
Form NR-5

# DISEASE

Refuge OTTAWA Year 19 XX 61

## Botulism

Period of outbreak mid-September

Period of heaviest losses mid-September

Losses:

| | Actual Count | Estimated |
|---|---|---|
| (a) Waterfowl | 119 | 300 |
| (b) Shorebirds | no | |
| (c) Other | no | |

| Number Hospitalized | No. Recovered | % Recovered |
|---|---|---|
| (a) Waterfowl | unknown | |
| (b) Shorebirds | | |
| (c) Other | | |

Areas affected (location and approximate acreage) 150

Sandusky Bay, near Port Clinton, Ohio, about 20 miles from the refuge area. 150 acres

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.

Maximum depth of water, 4 feet. Average about 1 foot

Condition of vegetation and invertebrate life

~~Cattail~~ Preeominately cattail, no unusual condition noted.

Remarks Specimens shipped t o Patuxant and State of Ohio Lab. b y GMA Bosak. State of Ohio confirmed botulism. Patuxant, non-committal.

## Lead Poisoning or other Disease

Kind of disease

Species affected

| Number Affected Species | Actual Count | Estimated |
|---|---|---|
| | | |
| | | |
| | | |

Number Recovered

Number lost

Source of infection

Water conditions

Food conditions

Remarks

INT.-DUP., D.C.- 53818-59

PUBLIC USE

Refuge OTTAWA Calendar Year ~~XXXX~~ 1961

| Total Use Visitor-Days | Hunting Use | Fishing Use | Miscellaneous Use |
|---|---|---|---|
| None | None | None | None |

Where practical, by means of occasional spot checks, or other methods, show by percent and visitor-days the breakdown of the above figures and other related information:

| Hunting (on refuge lands): | Percent | Visitor-Days | Acres | Miscellaneous | Percent | Visitor-Days |
|---|---|---|---|---|---|---|
| Waterfowl | | | | Recreation* | | |
| Upland Game | | | | Official | | |
| Big Game | | | | Economic Use | | |
| Supervised by Refuge | | By State | | No. of Blinds | Other | |

Hunting (off refuge Lands): Estimated man-days of hunting on lands Adjacent to the refuge 10,000 (These figures should not be included in hunting-use totals above).

Comments: Refuge Area not under control of Service in 1961.

Fishing:

Acres of ponds or lakes _____ and miles of streams _____ open to fishing.

*including picnicking, swimming, boating, camping, viewing wildlife, and photographing.

3-1757
Form NR-7
(Rev. June 1960)

(1)

# NONAGRICULTURAL COLLECTIONS, RECEIPTS, AND PLANTINGS

Refuge OTTAWA Year 19 61

No Collections, Receipts, or Plantings in 1961

| | Collections and Receipts (Seeds, rootstocks, trees, shrubs) | | | | | | Plantings (Marsh - Aquatic - Upland) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species | Amount (Lbs., bus., etc.) | (2) C or R | Date | Method or Source | Cost | (3) Total Amount on Hand | Location of Area Planted | Rate of Seeding or Planting | Amount Planted (Acres or Yards of Shoreline) | Amount and Nature of Propagules | Date | Survival | Cause of Loss |
| | | | | | | | | | | | | | |

(1) Report agronomic farm crops on Form NR-8
(2) C = Collections and R = Receipts
(3) Use "S" to denote surplus

Total acreage planted:
Marsh and aquatic _____
Hedgerows, cover patches _____
Food strips, food patches _____
Forest plantings _____

Remarks: _____

76148

3-1758
Form NR-8
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge OTTAWA County Lucas and Ottawa State Ohio

| Cultivated Crops Grown | Permittee's Share Harvested | | Government's Share or Return | | | | Total Acreage Planted | Green Manure, Cover and Waterfowl Browsing Crops Type and Kind | Total Acreage |
|---|---|---|---|---|---|---|---|---|---|
| | | | Harvested | | Unharvested | | | | |
| | Acres | Bu./Tons | Acres | Bu./Tons | Acres | Bu./Tons | | | |
| No crops planted or harvested on land under control of Ottawa National Wildlife Refuge in 1961. | | | | | | | | | |
| | | | | | | | | Fallow Ag. Land | |

No. of Permittees: Agricultural Operations _____ Haying Operations _____ Grazing Operations _____

| Hay - Improved (Specify Kind) | Tons Harvested | Acres | Cash Revenue | GRAZING | Number Animals | AUM'S | Cash Revenue | ACREAGE |
|---|---|---|---|---|---|---|---|---|
| | | | | 1. Cattle | | | | |
| | | | | 2. Other | | | | |
| | | | | 1. Total Refuge Acreage Under Cultivation | | | | |
| Hay - Wild | | | | 2. Acreage Cultivated as Service Operation | | | | |

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

INT.DUP.,D.C.61-88850

3-1570
NR-88
(4/54)

# REFUGE GRAIN REPORT

Refuge OTTAWA Months of September through December 1961 195

| (1) Variety* | (2) On Hand Beginning of Period | (3) Received During Period | (4) Total | (5) Grain Disposed of | | | | (6) On Hand End of Period | (7) Proposed or Suitable Use* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Transferred | Seeded | Fed | Total | | Seed | Feed | Surplus |
| No seed received, disposed, or on hand in 1961 | | | | | | | | | | | |

(8) Indicate shipping or collection points

(9) Grain is stored at

(10) Remarks

*See instructions on back.

# REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

**Report all grain in bushels.** For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

(1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR–9.

(3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.

(4) A total of columns 2 and 3.

(6) Column 4 less column 5.

(7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.

(8) Nearest railroad station for shipping and receiving.

(9) Where stored on refuge: "Headquarters granary," etc.

(10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

INT.-DUP. SEC., WASH., D.C. 17065

3-1759
Form NR-9
(April 1946)

# COLLECTIONS AND RECEIPTS OF PLANTING STOCK
(Seeds, rootstocks, trees, shrubs)

Refuge OTTAWA Year 1961

| Species | Collections | | | | Receipts | | Total Amounts on Hand | Amount Surplus |
|---|---|---|---|---|---|---|---|---|
| | Amount | Date or Period of Collection | Method | Unit Cost | Amount | Source | | |
| None in 1961 | | | | | | | | |

Interior Duplicating Section,
Washington 25, D. C. 84267

3-1761
Form NR-11

# TIMBER REMOVAL

Refuge OTTAWA Year 1951

| Permittee | Permit No. | Unit or Location | Acreage | No. of Units Expressed in B. F., ties, etc. | Rate of Charge | Total Income | Reservations and/or Diameter Limits | Species Cut |
|---|---|---|---|---|---|---|---|---|
| No Timber harvested this year | | | | | | | | |

Total acreage cut over.....  Total income.....

No. of units removed B. F.....  Method of slash disposal.....
Cords.....
Ties.....
.....

Interior--Duplicating Section, Washington, D. C.  82588